GENERAL RADIO COMPANY
service department

TESTING SPECIFICATIONS — August, 1959

Type 1108-A Coupling Panel

22 Baker Avenue
West Concord, Mass.

Test Equipment

1 - Ohmmeter
1 - Type 1304-B Beat-Frequency Oscillator or equivalent
1 - Type 1800-B Vacuum-Tube Voltmeter or equivalent

1.0 Ohmmeter Continuity Checks

1.1 Check that the low TEL. terminal (front), the low TEL. terminal (rear), and the low terminal of the TEL. jack (front), are all grounded.

Check that the high TEL. terminal (front), the high TEL. terminal (rear), and the high terminal of the TEL. jack (front), are connected together and that they are not grounded.

Check that the HIGH terminal of the front fx coaxial connector is connected to the high terminal of the rear fx coaxial connector, and that both terminals are not grounded.

Set all the front panel switches and controls fully counterclockwise.

Check that the following high terminals are directly connected and that they are not grounded:

H.F.M. OUT. 10-100 Mc (front) to H.F.M.'S H-2 (rear);
H.F.M. OUT. 1-10 Mc (front) to H.F.M.'S-M (rear);
H.F.M. OUT. 100-1000 Kc (front) to H.F.M.'S-L (rear).

1.2 Fx Control Circuit

Connect the ohmmeter between the fx terminal and ground. Set the fx switch to S.C. Check that the resistance reading varies smoothly from 500 to 100 ohms as the fx control is turned clockwise. Set the fx switch to OFF. The resistance reading must remain constant at 500 ohms throughout the range of the fx control. Set the fx switch to ON. The resistance reading must remain constant at 500 ohms throughout the range of the fx control.

1.3 100 Kc Control Circuit

Connect the ohmmeter between the STD. 100 kc terminal (rear) and ground. Connect capacitor C-2 across capacitor C-3. Set the STANDARD FREQUENCY

HARMONICS (S.F.H.) switch to OFF, and check that the resistance reading remains constant at 500 ohms throughout the range of the 100 kc control. Set the S.F.H. switch to 100 kc and short the DETECTOR INPUT-L terminal (rear). Set the DETECTOR switch to L. Check that the resistance reading varies smoothly from 500 to 100 ohms as the 100 kc control is turned clockwise.

1.4 10 kc Control Circuit

Connect the ohmmeter between the STD. 10 kc terminal (rear) and ground. Connect C-2 across C-3. Set the S.F.H. switch to OFF and check that the resistance reading remains constant at 500 ohms throughout the range of the 10 kc control. Set the S.F.H. switch to 10 kc and short the DETECTOR INPUT-L terminal. Set the DETECTOR switch to L. Check that the resistance reading varies smoothly from 500 to 100 ohms as the 10 kc control is turned clockwise.

Remove the lead connecting C-2 to C-3.

1.5 100/10 kc Control Circuit

Set the S.F.H. switch to 100/10 kc. Connect the ohmmeter between the STD. 100 kc terminal (rear) and the STD. 10 kc terminal (rear). Check that the resistance reading varies from 1000 to 160 ohms as both the 100 kc and 10 kc controls are turned clockwise.

1.6 Frequency Meter Circuit

Set the fx switch to S.C. and connect the ohmmeter between the H.F.M.'S-L terminal and ground. Set the FREQUENCY METER switch to L and the S.F.H. switch to OFF. The ohmmeter must read infinity.

Connect the ohmmeter between the H.F.M.'S-M terminal and ground. Set the FREQUENCY METER switch to M. The ohmmeter must read infinity.

Connect the ohmmeter between the H.F.M.'S H-1 terminal and ground. Set the FREQUENCY METER switch to H. The ohmmeter must read infinity.

Set the 100 kc and the 10 kc controls fully counterclockwise. Ground the DETECTOR INPUT-L terminal. Set the S.F.H. switch to 100/10 kc and connect the ohmmeter between the H.F.M.'S-L terminal and ground. Check that the resistance reading is 150-170 ohms, when the FREQUENCY METER switch is set to the L or the L-M positions.

Connect the ohmmeter between the H.F.N.'S-M terminal and ground. Check that the resistance reading is 150-170 ohms when the FREQUENCY METER switch is set to the M, L-M, or M-H positions.

Connect the ohmmeter between the H.F.M.'S H-1 terminal and ground. Check that the resistance reading is 150-170 ohms when the FREQUENCY METER switch is set to the H or the M-H positions.

1.7 Detector Input Circuits

Connect C-2 across C-3. Set all the front panel switches to OFF. Ground the DETECTOR INPUT-L terminal. Set the FREQUENCY METER switch to L and connect the ohmmeter between the H.F.M.'S-L terminal and ground. Check that the ohmmeter reads 100 ohms when the DETECTOR switch is set to L and infinity when it is set to M, H, or EXT.

Ground the DETECTOR INPUT-M terminal. Set the FREQUENCY METER switch to M and connect the ohmmeter between the H.F.M.'S-M terminal and ground. Check that the ohmmeter reads 100 ohms when the DETECTOR switch is set to M and infinity when it is set to L, H, or EXT.

Ground the DETECTOR INPUT-H terminal. Set the FREQUENCY METER switch to H and connect the ohmmeter between the H.F.M.'S H-1 terminal and ground. Check that the ohmmeter reads 100 ohms when the DETECTOR switch is set to H and infinity when it is set to M, L, or EXT. Ground the DETECTOR INPUT EXT. terminal. Check that the ohmmeter reads 100 ohms when the DETECTOR switch is set to EXT. and infinity when it is set to H, M, or L.

Remove the lead connecting C-2 to C-3.

1.8 Detector Output Circuits

The resistance from each DETECTOR OUTPUT terminal (L, M, H, and EXT.) to ground must be infinity.

Check that the DET. OUT.-1 and the DET. OUT.-2 terminals are connected.

Connect the ohmmeter from each DETECTOR OUTPUT terminal (L, M, H, and EXT.) in turn to the DET. OUT-2 terminal. The resistance reading of each circuit must be 150 ohms +10% (resistance of L-1) when the DETECTOR switch is set to the corresponding position (L, M, H, and EXT.) The ohmmeter must read infinity for all other DETECTOR switch positions.

2.0 10 kc Filter Checks

2.1 Connect the Type 1800-B Vacuum-Tube Voltmeter across the OUTPUT terminals of the Type 1304-B Beat-Frequency Audio Generator. Connect the Type 1304-B to the DETECTOR OUTPUT-L Coaxial Connector. Set the DETECTOR switch to L and the DETECTOR-INTERPOLATOR (D.-I.) switch to TEL. on the DETECTOR side. Adjust the Audio Generator output to 2.0 volts at 5 kc. Tune the Type 1304-B for a minimum voltage reading. This resonance point must be between 4.5 and 5.5 kc. Increase the Audio Generator output to 2.0 volts. Connect the Voltmeter across the front TEL. terminals. The Voltmeter must read 15-17 volts. Slowly increase the frequency of the Type 1304-B. Check that a minimum voltage reading (at the TEL. terminals) occurs before 11 kc is reached.

3.0 Speaker-Tel. Circuit Checks

3.1 Set the DETECTOR switch to L and connect the ohmmeter from the SPKR.

terminal to the DETECTOR OUTPUT-L terminal. Check for a resistance reading of 150 ohms when the D.-I. switch is set to the SPKR. position on the DETECTOR side. All other positions of the D.-I. switch must read infinity on the ohmmeter.

Connect the ohmmeter from the DETECTOR OUTPUT-L terminal to the TEL. terminal. Check for a resistance reading of 150 ohms when the D.-I. switch is set to the TEL. position on the DETECTOR side. All other positions on the D.-I. switch must read infinity on the ohmmeter.

Check that the INTERP. OUT.-L terminal is connected to the INTERP. OUT.-2 terminal. Connect the ohmmeter between the INTERP. OUT.-1 terminal and the TEL. terminal. Check for a short circuit when the D.-I. switch is set to the TEL. position on the INTERPOLATOR side. All other positions of the D.-I. switch must read infinity on the ohmmeter.

Connect the ohmmeter from the INTERP. OUT.-1 terminal to the SPKR. terminal. Check for a short circuit when the D.-I. switch is set to the SPKR. position on the INTERPOLATOR side. All other positions of the D.-I. switch must read infinity on the ohmmeter.

5.0 Microdial Circuit Check

5.1 Connect the ohmmeter between the MICRODIAL terminal and ground. Check for a short circuit when the MICRODIAL switch is set to S.C. Check for an open circuit when the MICRODIAL switch is set to the OFF or ON positions.

Connect the ohmmeter from the MICRODIAL terminal to the DET. OUT.-1 terminal. Check for a short circuit when the MICRODIAL switch is set to ON.

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